AMENDMENT TO THE CLAIMS

1. (Previously Presented) A diamond composite substrate, comprising:

a diamond monocrystalline substrate having first and second opposed main faces; and

a diamond polycrystalline film having crystals with random orientation laminated thereon by a vapor phase synthesis,

wherein the diamond monocrystalline substrate having a thickness defined by a spacing between the main faces to be at least 0.1 mm and no more 1 mm.

2. (Previously Presented) A diamond composite substrate according to claim 1, wherein a difference between an orientation of the first main face, which has a largest surface area of the diamond monocrystalline substrate and an orientation of a {100} plane is no more than 5 degrees, and

the diamond polycrystalline film is laminated on the second main face parallel to the first face.

3. (Previously Presented) A diamond composite substrate according to claim 2, wherein the first main face is the {100} plane.

4. (Cancelled)

5. (Previously Presented) A diamond composite substrate according to claim 1, wherein a thickness of the diamond polycrystalline film laminated over the diamond monocrystalline substrate is at least 0.1 mm and no more than 1 mm.

6. (Previously Presented) A diamond composite substrate according to claim 1, wherein a ratio of the thickness of the diamond monocrystalline substrate to the thickness of the diamond polycrystalline film is between 1:1 and 1:4.

7. (Previously Presented) A diamond composite substrate according to claim 1, wherein the diamond monocrystalline substrate is made up of a plurality of diamond monocrystals all having a same orientation of the first main face having the largest surface area, and

the plurality of diamond monocrystals are joined by the diamond polycrystalline film formed by the vapor phase synthesis over the diamond monocrystals.

8. (Previously Presented) A diamond composite substrate according to claim 1 wherein the difference between orientations of faces of the plurality of diamond monocrystals in a direction of rotation with respect to an axis perpendicular to the faces thereof is no more than 2 degrees, and

the difference between the orientations of the faces of the plurality of diamond monocrystals and the orientation of the {100} plane is no more than 5 degrees.

9. (Previously Presented) A diamond composite substrate according to claim 8, wherein the orientation of the faces of the plurality of diamond monocrystals is {100}.

10. (Previously Presented) A diamond composite substrate according to claim 7, wherein a difference in thickness between the respective diamond monocrystals is no more than 10 μm.

11. (Previously Presented) A diamond composite substrate according to claim 7, wherein a gap between the plurality of diamond monocrystals is no more than 500 μm.

12. (Previously Presented) A diamond composite substrate, wherein a diamond monocrystalline substrate having first and second opposed main faces is made up of a plurality of diamond monocrystals in which a difference between orientations of the diamond monocrystals in a direction of rotation with respect to an axis perpendicular to faces of the diamond monocrystals is no more than 2 degrees,

a difference between orientations of the faces of the plurality of diamond monocrystals and an orientation of a {100} plane is no more than 5 degrees, the plurality of diamond monocrystals are joined by a diamond polycrystalline film having crystals with random orientation formed by a vapor phase synthesis on the second face parallel to the faces of the plurality of diamond monocrystals,

an entire surface of the first main face is integrated by vapor-phase synthesized diamond monocrystals grown using the diamond monocrystalline substrate as a seed crystal, and

a spacing between the main faces is a thickness of the diamond monocrystalline substrate and at least 0.1 mm and no more than 1 mm.

13. (Previously Presented) A diamond composite substrate according to claim 12, wherein the orientation of the faces of the plurality of diamond monocrystals is {100}.

14. (Cancelled)

15. (Previously Presented) A diamond composite substrate according to claim 12 , wherein a thickness of the diamond polycrystalline film formed by the vapor phase synthesis over the plurality of diamond monocrystals is at least 0.1 mm and no more than 1 mm.

16. (Previously Presented) A diamond composite substrate according to claim 12, wherein a ratio of the thickness of the plurality of diamond monocrystals to the thickness of the diamond polycrystalline film is between 1:1 and 1:4.

17. (Previously Presented) A diamond composite substrate according to claim 12, wherein a gap between the plurality of diamond monocrystals is no more than 500 μm.

18. (Previously Presented) A diamond composite substrate according to claim 12, wherein a difference in the thickness between the plurality of diamond monocrystals is no more than 10 μm.

19. (Previously Presented) A diamond composite substrate according to claim 12, wherein a surface of the diamond polycrystalline film has been polished.

20. (Previously Presented) A diamond composite substrate according to claim 12, wherein a surface roughness Rmax of the diamond polycrystalline film is no more than 0.1 μm.

21. (Previously Presented) A method for manufacturing a diamond composite substrate having first and second opposed main faces,

lining up a plurality of diamond monocrystals having a same orientation;

forming a diamond polycrystalline film having crystals with random orientation by a vapor phase synthesis over the plurality of diamond monocrystals; and

joining the plurality of diamond monocrystals with the diamond polycrystalline film having crystals with random orientation,

wherein the diamond monocrystals have a thickness of at least 0.1 mm and no more than 1 mm.

22. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 21, wherein a deviation between the respective orientations of the plurality of diamond monocrystals in a direction of rotation with respect to an axis perpendicular to faces thereof having a largest surface area, is no more than 2 degrees, and a difference between orientations of the respective faces of the plurality of diamond monocrystals and an orientation of a {100} plane is no more than 5 degrees.

23. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 22, wherein the face having the largest surface area of the respective faces of the plurality of the diamond monocrystals is the {100} plane.

24. (Cancelled)

25. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 21, wherein a thickness of the diamond polycrystalline film formed by the vapor phase synthesis over the plurality of diamond monocrystals is at least 0.1 mm and no more than 1 mm.

26. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 21, wherein a ratio of the thickness of the plurality of diamond monocrystals to the thickness of the diamond polycrystalline film is between 1:1 and 1:4.

27. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 21, wherein a difference in thickness between the plurality of diamond monocrystals is no more than 10 μm.

28. (Previously Presented) A method for manufacturing a diamond composite substrate according to claim 21, wherein a gap between the plurality of diamond monocrystals is no more than 500 μm.

29. (New) A diamond composite substrate according to claim 1, wherein the diamond polycrystalline film has no monocrystalline layer and is distinct from the diamond monocrystalline substrate in a cross section.